

Title (en)
AUSTENITIC STAINLESS STEEL HAVING EXCELLENT PROCESSABILITY AND SURFACE CHARACTERISTICS, AND MANUFACTURING METHOD THEREFOR

Title (de)
AUSTENITISCHER EDELSTAHL MIT HERVORRAGENDER VERARBEITBARKEIT UND OBERFLÄCHENEIGENSCHAFTEN SOWIE HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
ACIER INOXYDABLE AUSTÉNITIQUE DOTÉ D'UNE EXCELLENTE APTITUDE AU TRAITEMENT ET DE CARACTÉRISTIQUES DE SURFACE EXCELLENTE, ET SON PROCÉDÉ DE FABRICATION

Publication
EP 3561127 A4 20191030 (EN)

Application
EP 17885341 A 20171221

Priority
• KR 20160178365 A 20161223
• KR 20170176063 A 20171220
• KR 2017015227 W 20171221

Abstract (en)
[origin: EP3561127A1] An austenitic stainless steel having excellent processability and surface characteristics and a method of manufacturing the austenitic stainless steel are disclosed. The austenitic stainless steel includes, by weight%, 0.005% to 0.15% of carbon (C), 0.1% to 1.0% of silicon (Si), 0.1% to 2.0% of manganese (Mn), 6.0% to 10.5% of nickel (Ni), 16% to 20% of chromium (Cr), 0.005% to 0.2% of nitrogen (N), the remainder iron (Fe) and other unavoidable impurities, wherein a degree of Ni surface negative segregation defined by the following Formula (1) is in a range of 0.6 to 0.9. C_{Ni-Min}/C_{Ni-Ave} is a minimum concentration of Ni on the surface of the austenitic stainless steel and C_{Ni-Ave} is an average concentration of Ni on the surface of the austenitic stainless steel.

IPC 8 full level
C22C 38/42 (2006.01); **B22D 11/22** (2006.01); **C21D 1/18** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/44** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
B22D 11/002 (2013.01 - EP); **B22D 11/22** (2013.01 - KR); **B22D 11/225** (2013.01 - EP); **C21D 1/18** (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - US); **C21D 6/008** (2013.01 - US); **C21D 8/02** (2013.01 - EP); **C21D 8/0205** (2013.01 - EP US); **C21D 8/0226** (2013.01 - EP KR); **C21D 8/0236** (2013.01 - EP KR); **C21D 9/0081** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP US); **C22C 38/004** (2013.01 - KR); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP); **C22C 38/40** (2013.01 - KR); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US); **C21D 2211/001** (2013.01 - KR US)

Citation (search report)
• [X] JP H07292438 A 19951107 - NIPPON STEEL CORP
• [I] JP H07268455 A 19951017 - NIPPON STEEL CORP
• [A] JP H07268453 A 19951017 - NIPPON STEEL CORP
• [A] JP H0559447 A 19930309 - NIPPON STEEL CORP
• [A] US 5467811 A 19951121 - SUEHIRO TOSHIYUKI [JP], et al
• [A] US 5281284 A 19940125 - UEDA MASANORI [JP], et al
• [A] JP 2002309351 A 20021023 - NIPPON STEEL CORP
• [A] JP H08300124 A 19961119 - NIPPON STEEL CORP
• See references of WO 2018117683A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3561127 A1 20191030; **EP 3561127 A4 20191030**; CN 110225992 A 20190910; CN 110225992 B 20211029; JP 2020509212 A 20200326; JP 6853887 B2 20210331; KR 102030162 B1 20191108; KR 20180074590 A 20180703; MX 2019007617 A 20191105; US 11542569 B2 20230103; US 2020087752 A1 20200319

DOCDB simple family (application)
EP 17885341 A 20171221; CN 201780084380 A 20171221; JP 2019534199 A 20171221; KR 20170176063 A 20171220; MX 2019007617 A 20171221; US 201716473042 A 20171221